

## EXAMINER'S NOTES

Matches 183; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKRIIVAAIAVSLTTTSTITASADPSKSKAQAQVSAAEAGITGTWYNQUGSTFIYTAGAD 60  
 DB 1 MKRIIVAAIAVSLTTTSTITASADPSKSKAQAQVSAAEAGITGTWYNQUGSTFIYTAGAD 60  
 QY 61 GALTGTYESAVGNAESRYVLTGRYDSAPATDGSGLGWTVMKNNYRNHSAATTWSGOY 120  
 DB 61 GALTGTYESAVGNAESRYVLTGRYDSAPATDGSGLGWTVMKNNYRNHSAATTWSGOY 120  
 QY 121 VGGAERARINTOMLITSGTTEANAMKSTLVGHDTFTVKPSAASIDAKKAGVNNGNPLDA 180  
 DB 121 VGGAERARINTOMLITSGTTEANAMKSTLVGHDTFTVKPSAASIDAKKAGVNNGNPLDA 180  
 QY 181 VQQ 183  
 DB 181 VQQ 183

RESULT 2  
 AAP93530  
 ID AAP93530 standard; protein; 183 AA.  
 AC AAP93530;  
 DT 04-JUN-1990 (first entry)  
 DE Streptavidin protein.  
 KM Streptavidin; Streptomyces avidinii; biotin.  
 OS Streptomyces avidinii.  
 FH Key Location/Qualifiers  
 FT Peptide 1..24  
 FT Protein /note="leader sequence"  
 FT /note="this sequence was as the basis for the design for  
 the synthetic gene of the present invention."

W08903422-A.  
 PD 20-APR-1989.  
 PF 07-OCT-1988; 88WO-GB000831.  
 PR 08-OCT-1987; 87GB-00023661.  
 PA (BRRI-) BRIT BIO-TECHN LTD.  
 DR WPI; 1989-130040/17.

PT DNA sequence encoding streptavidin and vector - comprising hybrid gene  
 encoding fusion protein with biotin-binding activity.

PS Fig 1; page 1/5; 22pp; English.

CC Streptavidin is a 60KD protein isolated from Streptomyces avidinii that  
 binds extremely tightly to the vitamin biotin. It is composed of four  
 identical subunits of 15KD and binds 4 mole of biotin per mole of four  
 protein. It is structurally related to the protein avidin. It can be  
 readily conjugated to a range of other proteins. In order to facilitate  
 the incorporation of streptavidin into expression vectors and the  
 production of novel chimeric proteins containing streptavidin  
 functionality, an improved novel synthetic gene for streptavidin has been  
 constructed (AAN90755) based on the amino acid sequence of mature  
 streptavidin

Sequence 183 AA;  
 Query Match 100.0%; Score 936; DB 1; Length 183;  
 Best Local Similarity 100.0%; Pred. No. 1.3e-75;  
 Matches 183; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKRIIVAAIAVSLTTTSTITASADPSKSKAQAQVSAAEAGITGTWYNQUGSTFIYTAGAD 60  
 DB 1 MKRIIVAAIAVSLTTTSTITASADPSKSKAQAQVSAAEAGITGTWYNQUGSTFIYTAGAD 60  
 QY 61 GALTGTYESAVGNAESRYVLTGRYDSAPATDGSGLGWTVMKNNYRNHSAATTWSGOY 120  
 DB 61 GALTGTYESAVGNAESRYVLTGRYDSAPATDGSGLGWTVMKNNYRNHSAATTWSGOY 120  
 QY 121 VGGAERARINTOMLITSGTTEANAMKSTLVGHDTFTVKPSAASIDAKKAGVNNGNPLDA 180  
 DB 121 VGGAERARINTOMLITSGTTEANAMKSTLVGHDTFTVKPSAASIDAKKAGVNNGNPLDA 180  
 QY 181 VQQ 183  
 DB 181 VQQ 183

RESULT 3  
 AAR44491  
 ID AAR44491 standard; protein; 183 AA.  
 AC AAR44491;  
 DT 25-MAR-2003 (revised)  
 DT 27-JUN-1994 (first entry)  
 DE Streptavidin gene.  
 KM Streptavidin; protein secretion; Bacillus subtilis.  
 OS Streptomyces avidinii.  
 FH Key Location/Qualifiers  
 FT Molec-difference 1..24  
 FT Protein /label=signal\_peptide  
 FT /label=183  
 FT /label=streptavidin  
 FT Peptide 37..183  
 FT /note="expressed by transformed B. subtilis"

W09324631-A1.  
 PD 09-DEC-1993.  
 PF 27-MAY-1993; 93WO-US005240.  
 PR 29-MAY-1992; 92US-00891524.  
 PA (DUPO) DU PONT DE NEMOURS & CO E I.  
 DR WPI; 1993-405822/50.  
 DR P-PSDB; AAC53412.

PT Streptavidin prodr. from Bacillus subtilis - using signal protein from  
 bacterial exo-protein and expression element from Gram positive bacterial  
 protein.

PS Disclosure; Fig 1b; 54pp; English.

CC Tetrameric biologically active streptavidin is produced by secretion from  
 CC Bacillus subtilis transformed with a plasmid encoding the sequence.  
 CC (Updated on 25-MAR-2003 to correct PN field.)

Sequence 183 AA;  
 Query Match 100.0%; Score 936; DB 2; Length 183;  
 Best Local Similarity 100.0%; Pred. No. 1.3e-75;  
 Matches 183; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKRIIVAAIAVSLTTTSTITASADPSKSKAQAQVSAAEAGITGTWYNQUGSTFIYTAGAD 60